

Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and other treponematoses (clinical and therapy; serology and biological false-positive phenomenon; pathology and experimental)
Gonorrhoea (clinical; microbiology; therapy)
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Reiter's disease

Trichomoniasis
Candidosis
Genital herpes
Other sexually transmitted diseases
Public health and social aspects
Miscellaneous

Syphilis and other treponematoses (clinical and therapy)

Neurosyphilis revisited—a contemporary wolf in sheep's clothing

SG ALLEN, CC SMITH, AND AG DOWNIE (City Hospital, Nottingham, UK). *Scott Med J* 1983;28:57-61.

Penicillin concentrations in cerebrospinal fluid and serum after intramuscular, intravenous, and oral administration to syphilitic patients

G-B LÖWHAGEN, JE BRORSON, AND B KAIJSER (Acta Derm Venereol (Stockh) 1983;63:53-8.

Syphilis (pathology and experimental)

The interaction between *Treponema pallidum* and human polymorphonuclear leucocytes

DM MUSER, M HAGUEPARK, F GYORKEY, ET AL (Veterans Administration Medical Center, Houston, Texas, USA). *J Infect Dis* 1983;147:77-86.

The interaction between polymorphonuclear leucocytes (PMNLs) and *Treponema pallidum* was studied. Intradermal injection of $\geq 10^6$ *T pallidum* into rabbits caused a rapid accumulation of PMNLs. Human serum released chemotaxigenic factor (C5a) during incubation in vitro with *T pallidum*. Incubation of *T pallidum* with human PMNLs in vitro (ratio—100:1) stimulated chemiluminescence. These responses were dependent upon the

presence of both antibody and complement and were greatest when serum from a patient with late secondary syphilis was used as a chemotaxigenic source or for opsonization. Electron microscopic studies documented the rapid uptake of *T pallidum* into membrane-bound vacuoles in the human PMNLs in vitro after incubation for as little as five minutes, with leucocyte degranulation and loss of treponemal integrity observed after four hours. *T pallidum* were found within PMNLs three hours after intradermal inoculation of rabbits. These data show that PMNLs are attracted to, and appear to ingest, *T pallidum* but they fail to explain why inoculation of these organisms is not followed by eradication.

Authors' summary

Gonorrhoea (clinical)

Comparative efficacy of cefmenoxime versus penicillin in the treatment of gonorrhoea

SR OBAID, MY KHAN, ML SIMPSON, ET AL (University of Minnesota, Minneapolis, Minnesota, USA). *Antimicrob Agents Chemother* 1983;23:349-51.

Gonorrhoea (microbiology)

Comparative in vitro activity of cefodizime, ceftazidime, aztreonam and other selected antimicrobial agents against *Neisseria gonorrhoeae*

MY KHAN, RP GRUNINGER, SM NELSON AND SR OBAID (University of Minnesota, Minneapolis, Minnesota, USA). *Antimicrob Agents Chemother* 1983;23:477-8.

Comparative in vitro activity of Sch 29, 482, a new oral penem, against *Neisseria gonorrhoeae*

MY KHAN, RP GRUNINGER, SM NELSON, AND ML SIMPSON (University of Minnesota, Minneapolis, Minnesota, USA). *Antimicrob Agents Chemother* 1983;23:481-2.

In vitro antimicrobial activity of eight new β -lactam antibiotics against penicillin resistant *Neisseria gonorrhoeae*

SB KERBS, JR STONE JUN, SW BERG, AND WO HARRISON (United States Navy Hospital, San Diego, California, USA). *Antimicrob Agents Chemother* 1983;23:541-4.

A study of the relationship between ABO blood groups, secretor status, and infection with *Neisseria gonorrhoeae*

AP JOHNSON, MF OSBORN, NF HANNA, ET AL (Clinical Research Centre, Harrow, Middlesex, UK). *J Infect* 1983;6:171-4.

Phagocytosis and killing of *Neisseria gonorrhoeae* by *Trichomonas vaginalis*

P FRANCIOLI, H SHIO, RB ROBERTS, AND M MULLER (Rockefeller University, New York, USA). *J Infect Dis* 1983;147:87-94.

The role of pili and outer membrane vesicles in the immunogenicity of *Neisseria gonorrhoeae* in the guinea pig chamber model

VY PERERA, CW PENN, AND H SMITH (Department of Microbiology, The University of Birmingham, Birmingham, U.K.). *FEMS Microbiology Letters* 1983;17:303-6.

Synthesis and modification of the peptidoglycan in *Neisseria gonorrhoeae*

TJ DOUGHERTY (Rockefeller University, New York, USA). *FEMS Microbiology Letters* 1983;17:51-5.

Natural immunity to murine gonococcal bacteraemia: roles of complement, leucocytes, and sex

PR STREETER, AC WUNDERLICH, RR CORBEIL, AND LB CORBEIL (Washington State University, Pullman, Washington, USA). *Can J Microbiol* 1983; **29**: 331-8.

Spread of penicillinase producing and transfer plasmids from the gonococcus to *Neisseria meningitidis*

JR DILLON, M PAUZÉ, AND KH YEUNG (Laboratory Center for Disease Control, Ottawa, Canada). *Lancet* 1983; **i**: 779-80.

Anogenital gonorrhoea and pharyngeal colonisation with meningococci: a serogroup analysis

H YOUNG, AB HARRIS, DHH ROBERTSON, AND RJ FALLON (Department of Bacteriology, University of Edinburgh, Edinburgh, UK). *J Infect* 1983; **6**: 49-54.

Outer membrane proteins of *Neisseria gonorrhoeae* associated with survival within human polymorphonuclear phagocytes

NJ PARSONS, AAA KWAASI, VY PERERA, ET AL (University of Birmingham, Birmingham, UK). *J Gen Microbiol* 1982; **128**: 3077-82.

Chlamydial infections

A rapid immunoperoxidase assay for the detection of specific IgG antibodies to *Chlamydia trachomatis*

R CEVENINI, F RUMPIANESI, M DONATI, AND I SAROV (University of Bologna, Bologna, Italy). *J Clin Pathol* 1983; **36**: 353-6.

Laparoscopy in women with chlamydial infection and pelvic pain—a comparison of patients with and without salpingitis

P WØLNER-HANSEN, P-A MÅRDH, L SVENSSON, AND L WESTRÖM (University of Lund Hospital, Lund, Sweden). *Obstet Gynecol* 1983; **61**: 299-303.

In vitro activity of a group of broad spectrum cephalosporins and other β -lactam antibiotics against *Chlamydia trachomatis*

MR HAMMERSCHLAG AND A GLEYZER (State University of New York, Downstate Medical Center, Brooklyn, New York, USA). *Antimicrob Agents Chemother* 1983; **23**: 493-4.

Characterisation of a monoclonal antibody to the group antigen of *Chlamydia* spp and its use for antigen detection by reverse passive haemagglutination and indirect immunofluorescence

MJ THORNLEY, M LUSHER, ML SCOTT, ET AL (Department of Pathology, University of Cambridge, Cambridge, UK). *FEMS Microbiology Letters* 1983; **17**: 45-50.

Microplate culture with PAS staining for the diagnostic isolation of *Chlamydia trachomatis*

H NAUGHTON, AND H MALLINSON (Regional Public Health Laboratory, Fazakerley Hospital, Liverpool, UK). *Med Lab Sci* 1983; **40**: 193-6.

Detection of *Chlamydia trachomatis* inclusions in McCoy cell cultures with fluorescein conjugated monoclonal antibodies

WE STAMM, M TAM, M KOESTER, AND L CLES (University of Washington, Seattle, Washington, USA). *J Clin Microbiol* 1983; **17**: 666-8.

Detection of chlamydial cervicitis by Papanicolaou stained smears and culture

DA DORMAN, LM DANOS, DJ WILSON, ET AL (Department of Pathology, Easton Hospital, Easton, Pennsylvania, USA). *Am J Clin Pathol* 1983; **79**: 421-5.

The ability of the cervical Papanicolaou (Pap) stained smear to detect cervicitis associated with *Chlamydia trachomatis* was investigated. Cultures and cervical cytology samples were obtained from 487 women seen at the Mayo Clinic Department of Obstetrics and Gynecology and at the Sexually Transmitted Disease clinic of the Olmsted County Health Department. Adequate Pap stained smears contained endocervical or metaplastic cells. Thirty seven patients had positive chlamydia cultures; of these 14 were cytologically suggestive of chlamydia, 10 were negative but satisfactory, and 13 were unsatisfactory. Of the 450 patients with negative cultures, 21 had cytological findings suggesting infection. Fourteen (40%) of 35 cases suggestive cytologically, were confirmed by culture. Eight of the 21 false positive cytologies were in postpartum women. Because of problems with specificity and inadequate smears, cervical cytology specimens should not replace

culture as a means of detection, but can identify women who should be cultured for *C trachomatis*.

Authors' summary

Non-specific genital infection

***Mycoplasma genitalium*, a new species from the human urogenital tract**

JG TULLY, D TAYLOR-ROBINSON, DL ROSE, ET AL (National Institute for Allergy and Infectious Disease, Molecular Biology Laboratory, Frederick, Maryland, USA). *International Journal of Systematic Bacteriology* 1983; **33**: 387-96.

Microbiologic study of infertile women at the time of diagnostic laparoscopy: association of *Ureaplasma urealyticum* with a defined subpopulation

GH CASSELL, JB YOUNGER, MB BROWN, ET AL (University of Alabama, School of Medicine, Birmingham, Alabama, USA). *N Engl J Med* 1983; **308**: 502-4.

Subsequent pregnancies among 161 couples treated with *T mycoplasma* genital tract infection

A TOTH, ML LESSER, C BROOKS, AND D LABRIOLA (Cornell University Medical Center, New York, USA). *N Engl J Med* 1983; **308**: 505-7.

161 men with *T mycoplasma* present in semen cultures were treated for four weeks with doxycycline 100 mg twice daily in an attempt to assess whether their subsequent fertility would improve. The variables analysed were: husband's occupation, whether the marriage was first, second or more, length of marriage, whether children had been conceived in the marriage, time taken to conceive, other diagnostic or therapeutic procedures undertaken, and whether or not the mycoplasma had been eradicated. Statistical analyses of the variables were undertaken by the appropriate tests. The results were interpreted to mean that the variable most significantly associated with the time to a successful pregnancy was the presence or absence of mycoplasma at the end of the treatment period. The next two variables in importance were hysterosalpingography and tuboplasty, both of which were less likely to give a successful pregnancy.

G D Morrison

Trichomoniasis

Identification of immunogenic and antibody binding membrane proteins of pathogenic *Trichomonas vaginalis*

JF ALDERETE (University of Texas, San Antonio, Texas, USA). *Infect Immun* 1983; **40**:284-91.

An analysis of the proteinases of *Trichomonas vaginalis* by polyacrylamide gel electrophoresis

GH COOMBES AND MJ NORTH (University of Glasgow, Glasgow, UK). *Parasitology* 1983; **86**:1-6.

Genital Herpes

Herpes simplex virus proctitis in homosexual men: clinical, sigmoidoscopic, and histopathological features

FE GOODELL, TC QUINN, E MKRTICHIAN, ET AL (Childrens Orthopedic Hospital and Medical Center, Seattle, Washington, USA). *N Engl J Med* 1983; **308**:868-71.

Acute herpes simplex virus (HSV) infection was detected in 23 of 102 consecutively examined sexually active male homosexuals who presented with anorectal pain, discharge, tenesmus, or hematochezia, as compared with three of 75 homosexual men without gastrointestinal symptoms ($p < 0.01$). Findings that were significantly more frequent in men with HSV proctitis than in men with proctitis due to other infectious causes included fever (48%), difficulty in urinating (48%), sacral paresthesias (26%), inguinal lymphadenopathy (57%), severe anorectal pain (100%), tenesmus (100%), constipation (78%), perianal ulcerations (70%), and the presence of diffuse ulcerative or discrete vesicular or pustular lesions in the distal 5 cm of the rectum (50%). Serological evidence indicated that 85% of the men with symptomatic HSV proctitis were having their first episode of HSV-2 infection. The diagnosis of HSV proctitis is suggested by the presence of severe anorectal pain, difficulty in urinating, sacral paresthesias or pain, and diffuse ulceration of the distal rectal mucosa.

Authors' summary

Treatment of first episodes of genital herpes simplex virus infection with oral acyclovir: a randomised double blind control study trial in normal subjects

YJ BRYSON, M DILLON, M LOVETT, ET AL (University of California, Los Angeles, California, USA). *N Engl J Med* 1983; **308**:916-20.

A double blind placebo controlled trial of oral acyclovir in the treatment of first episodes of genital herpes simplex infections in 48 adults (31 women 17 men) was performed. Subjects were randomized to receive either placebo or acyclovir (200 mg per dose) five times daily for 10 days; they were examined on at least eight visits until healed and at monthly visits thereafter. Acyclovir treatment, as compared with placebo, significantly reduced virus shedding, new lesion formation after 48 hours, and the duration of genital lesions in both men and women. The total duration and severity of clinical symptoms (such as pain, adenopathy, dysuria, and malaise) were significantly reduced by acyclovir in both men and women by the third and fourth day respectively ($p \leq 0.025$) as compared with placebo. No toxicity was observed. Recurrence rates have so far been similar in placebo and acyclovir recipients. Oral acyclovir treatment of first episode genital herpes simplex virus infections is clinically effective but it does not seem to prevent virus latency or associated recurrent disease.

Authors' summary

Typing of herpes simplex virus by an enzyme linked immunosorbent assay with monoclonal antibodies

E NILHEDEN, S JEANSSON, AND A VAHCNE (Institute of Medical Microbiology, Gothenburg University, Gothenburg, Sweden). *J Clin Microbiol* 1983; **17**:677-80.

Herpes type 2 infection with unusual generalised manifestations and delayed diagnosis in an adult male

JC HIERHOLZER, JA STEWART, JP HIMMELWRIGHT, AND RM EVERETT (Centers for Disease Control, Atlanta, Georgia, USA). *The Journal of Infection* 1983; **6**:187-92.

An immunoelectron microscopy study of the relationship between herpes gestationis and polymorphic eruption of pregnancy

W JURECKA, RC HOLMES, MM BLACK, ET AL (St Thomas' Hospital, London, UK). *Br J Dermatol* 1983; **108**:147-52.

Primary and recurrent concomitant genital infection with herpes simplex virus type 1 and type 2

KH FIFE, O SCHMIDT, M REMINGTON, AND L COREY (University of Washington, Seattle, USA). *J Infect Dis* 1983; **147**:163-4.

Other sexually transmitted diseases

The identification of *Gardnerella vaginalis*

E TAYLOR AND I PHILLIPS (St Thomas' Hospital, London, UK). *J Med Microbiol* 1983; **16**:83-92.

A collection of 72 strains of catalase negative gram positive, gram negative, and gram variable coccobacilli isolated from samples of vaginal discharge from women with non-specific vaginal infection was examined in an attempt to develop an identification system for *Gardnerella vaginalis* that could be used in a diagnostic laboratory. Carbohydrate fermentation tests were found to be poorly reproducible and of little differentiating value. Enzyme tests were found similarly unhelpful, as were many antibiotic susceptibility and chemical inhibition tests. However, seven tests—susceptibility to trimethoprim and two concentrations of metronidazole, growth in the presence of 2% (w/v) sodium chloride and on nutrient agar, lactic acid production from glucose, and β haemolysis on human blood agar—were used successfully in this study to separate *G vaginalis* from catalase negative coryneforms and lactobacilli. Of these tests, susceptibility to trimethoprim and metronidazole together with β haemolysis on human blood agar are the most likely to provide rapid accurate identification. A possible identification scheme is outlined.

Authors' summary

Isolation of *Haemophilus ducreyi* from genital ulcerations in white men in Johannesburg

AC MAUFF, RC BALLARD, YR BILGERI, AND HJ KOORNHOF (University of Witwatersrand, Johannesburg, South Africa). *S Afr Med J* 1983; **63**:236-7.

Scabies: an epigemiologic reassessment

CG BURKHART (Medical College of Ohio, Toledo, Ohio, USA). *Ann Intern Med* 1983; **98**:498-503.

Isoantigen studies in condylomata acuminata of the uterine cervix: an immunoperoxidase study

NC MAMBO (University Hospital, Saskatoon, Saskatchewan, Canada). *Am J Clin Pathol* 1983;79:178-81.

Minimal criteria for the identification of *Gardnerella vaginalis* isolated from the vagina

JLS JOLLY (Public Health Laboratory, Ipswich Hospital, Ipswich, Suffolk, UK). *J Clin Pathol* 1983;36:476-8.

Vaginal swabs were examined for the presence of *Gardnerella vaginalis*. Of 294 isolates with appropriate colonial and cellular morphology subjected to an identification procedure, 203 (69%) were identified as *G vaginalis*. The 91 isolates not identified as *G vaginalis* were differentiated by their inability to ferment starch, cause diffuse β haemolysis on human blood agar, or hydrolyse hippurate. Other tests often used in the identification of *G vaginalis* were found to be insufficiently specific. Failure to ferment starch coexisted with failure to cause β haemolysis or to hydrolyse hippurate or both. The starch fermentation test may therefore be omitted. The tests for β haemolysis and hippurate hydrolysis, being relatively simple to perform and interpret, are considered indispensable for the accurate identification of *G vaginalis* in the service laboratory.

Author's summary

Public health and social aspects

Medicare cards for tracing sexually transmitted diseases?

E MICHAELS *Can Med Assoc J* 1983;128:314-9.

Centres for sexually transmitted diseases in Australia

NATIONAL VENEREOLOGY COUNCIL OF AUSTRALIA *Med J Australia* 1983;1:134.

Miscellaneous

Urethral infections in men and women

ES WONG, AND WE STAMM (University of Washington, Seattle, Washington, USA). *Annu Rev Med* 1983;34:337-58.

Acquired immune deficiency syndrome in four homosexual men

W ROZENBAUM, D KLATZMAN, C MAYAUD, ET AL (Department of Public Health and Tropical Medicine, Hôpital Pitie, Paris, France). *La Presse Médicale* 1983;12:1149-54.

The acquired immunodeficiency syndrome: current status

V QUAGLIARELLO (Yale University School of Medicine, New Haven, Connecticut, USA). *Yale J Biol Med* 1982;55:443-52.

Disseminated *Mycobacterium avium* intracellular infection in homosexual men with acquired cell mediated immunodeficiency: a histologic and immunologic study of two cases

CC SOHN, RW SCHROFF, KE KIEWER, ET AL (University of Michigan, Ann Arbor, Michigan, USA). *Am J Clin Pathol* 1983;79:247-52.

Disseminated *Mycobacterium avium* intracellular infections were found at autopsy in two homosexual men in whom acquired cell mediated immunodeficiencies and marked decreases in the subpopulation of lymphocytes expressing the T helper phenotype had been well studied. The histological manifestations were similar to those found in lepromatous leprosy, also known to be associated with cell mediated immunodeficiency. Possible correlations between the cellular immunodeficiency in our patients and an increased susceptibility to *Mycobacterium avium* intracellular infection as well as the unusual histological manifestation of the mycobacterial infection are examined.

Authors' summary